REMARKS

The present Amendment is in response to the Office Action of September 29, 2005. In view of the foregoing amendments and the comments which follow, favorable reconsideration is respectfully requested.

In the noted Office Action, the Examiner has acted upon pending claims 30-34, 36-55 and 57-61. Of these claims, claims 37-40 have been allowed, which action is much appreciated. In addition, claims 32, 34, 36, 47 and 49-52 are merely objected to, but otherwise contain allowable subject matter. Claims 30, 31, 33, 41-46, 48, 53-55 and 57-61 stand rejected. Reconsideration of the individual rejections is respectfully requested as set forth below.

The Examiner first objects to claim 30 as being indefinite. Amendments have been made to this claim in order to correct the noted deficiency.

Claims 30, 31, 54 and 57 have been rejected under §103 as being obvious over Ishiguro, taken in view of Wechsler. The Ishiguro patent is relied upon for showing a fiber laser within a "box", while Wechsler is relied upon to teach a temperature controlled enclosure. The Examiner states that it is "understood" that the repetition rate of the laser will be stabilized when the temperature is controlled in the enclosure.

The foregoing rejection is respectfully traversed.

First of all, the patent to Wechsler discloses nothing regarding the stabilization of the repetition rate of a laser. In the first instance, the laser of Wechsler is a simple laser diode controlled in on-off fashion, and as such does not have a "repetition rate" as that term is understood in the art.

In more detail, the laser diode of Wechsler is used in a printer environment in which the laser is scanned across the surface of a photoreceptor. As shown in Figure 4, for example, a video signal is impressed upon the voltage supplied to the laser diode so that the laser amplitude is modulated by the video signal in order to expose the photoreceptor accordingly. The laser is turned on during the entire period in which it is rastered across the width of the "page" except for margin areas on either side in which the laser is "blanked" or simply turned off. Thus, the laser of Wechsler is simply turned on and off by the application of appropriate signals and does not have a "repetition rate" as that term is commonly understood.

Further, Wechsler does not use any form of temperature control. Instead, a temperature compensation scheme is implemented. In Wechsler, diode current is adjusted in order to try to exert control over the change in the light power versus input current curve with temperature (see Figure 2) in order to compensate for aging of the laser. Consequently, this scheme has no relevance to the concept of controlling repetition rate, or to temperature control per se.

Wechsler in fact teaches away from the use of a temperature-controlled enclosure. Specifically, in column 1, temperature controlled enclosures are rejected as being "expensive" and as not being able to "cancel faster thermal effects". Directly following this disclosure, at line 29, Wechsler states that "a more effective solution is to drive the laser diode with an adaptive circuit which updates its calibration every scanned line".

In other words, Wechsler expressly rejects temperature control in favor of temperature compensation. Therefore, it is wholly inappropriate to rely upon Wechsler as a teaching of temperature control, inasmuch as Wechsler expressly teaches away from such a solution.

Similarly, with regard to Ishiguro, this reference discloses only that the fiber laser disclosed therein is housed within a "box" i.e., a suitable housing. Nowhere is there any teaching or suggestion that the enclosure has any isolation function, nor is there any teaching or suggestion that the enclosure may be environmentally and/or temperature controlled.

Accordingly, neither of the references disclose any connection whatsoever between the use of an enclosure and the control of repetition rate. Similarly, neither of the references disclose any connection between stabilization of a fiber laser and the control of its environment.

Accordingly, favorable reconsideration of the subject rejection is respectfully requested.

Claims 33, 53 and 55 were rejected over the combination of Ishiguro and Wechsler, taken further in view of Wayne. This rejection is respectfully traversed.

Claims 33 and 55 are respectively dependent upon rejected claims 31/30 and 54, and therefore the arguments presented above are equally applicable with respect to these claims. That is, dependent claims 33 and 55 are considered allowable at least for the reasons presented with respect to independent claims 30 and 54.

With respect to claim 53, which is an independent claim, it is respectfully submitted that none of the references relied upon teach or suggest an acoustically damped fiber spool. Ishiguro only teaches the looping of a fiber laser for space-saving purposes. The Wayne patent fails to disclose any type of laser whatsoever. To the extent that this reference is relevant to acoustic damping, the reference describes a "liquid" material which supports an electrode-optic crystal, surrounded by a lead sleeve 18 which provides damping qualities. Applicant respectfully submits that this teaching is essentially irrelevant to the acoustic damping of fiber laser spools.

Moreover, it is also apparent that the reference has been combined with Wechsler and Ishiguro through hindsight, in that there is no motivation for combining the references whatsoever.

Finally, it is apparent from the disclosure of Wayne that that device is useful only in the context of canceling or compensating for the piezoelectric effect which is induced in certain electro optic crystals, which causes a strain in the crystal which affects its birefringence. As such, Wayne's teachings are irrelevant to the field of fiber lasers, which do not exhibit this effect.

Claim 58 has been rejected over the combination of Ishiguro, Wechsler, and Hsu. This rejection is respectfully traversed.

The Hsu patent has been cited for the use of a fiber laser in connection with a piezoelectric transducer or PZT. Claim 58 is dependent upon independent claim 57, which is allowable for all of the reasons presented above. Accordingly, claim 58 is similarly allowable as being dependent upon an allowable independent claim.

Moreover, the Hsu reference is deficient for the teachings ascribed to it by the Examiner. Particularly, Hsu appears to be directed to a continuous wave laser which by definition does not have a "repetition rate". Accordingly, Hsu has no relevance with respect to a system wherein laser repetition rate is controlled by a PZT. In Hsu, the voltage applied to the PZT controls the wavelength tuning of the laser, as clearly shown in Figure 10.

Claim 59 has been rejected over the combination of Ishiguro, Wechsler, Hsu and the admitted prior art. The Examiner relies upon the admitted prior art for teaching the use of a phase-locked loop or PLL circuit. Applicant submits that claim 59, as dependent upon

dependent claim 58, and independent claim 57, both of which have been shown to be allowable, is allowable at least for the reasons presented above with respect to claims 57 and 58.

Claims 41 and 42 have been rejected under §103 as being unpatentable over Hsu, taken in view of Wechsler. Applicant respectfully traverses this rejection.

Firstly, the rejection is inappropriate because Wechsler does not teach a temperature controlled enclosure as stated by the Examiner. Wechsler teaches away from such enclosures.

As admitted by the Examiner, Hsu also fails to disclose the use of a temperature controlled enclosure, and in fact teaches away from the same.

Accordingly, inasmuch as both of the cited references in fact teach away from the use of a temperature controlled enclosure, Applicant respectfully submits that the rejection is inappropriate and should be withdrawn.

With respect to the Examiner's statement regarding claim 42, the Examiner is incorrect in stating that Hsu discloses that his PZT alters the repetition rate. As stated previously, Hsu discloses that the PZT is used to tune the laser wavelength.

Claims 43 and 44 have been rejected under §103 as being obvious over the combination of Hsu, Wechsler, and Rahn. The Examiner cites Rahn for teaching the driving of a PZT using a sinusoidal signal.

Applicant submits that claims 43 and 44 are allowable for at least the reasons discussed above in connection with its superior claim 42 and independent claim 41.

Furthermore, a close reading of Rahn reveals that the sinusoidal signal from source 41 is used only as a modulation input and is not directly used to drive the PZT.

Claim 45 has been rejected under §103 as being obvious over Ishiguro in view of Wechsler. In this rejection, the Examiner again relies upon Wechsler to teach a temperature controlled enclosure. Similarly to the arguments presented with respect to claims 30 and 41, Applicant respectfully submits that neither Wechsler nor Ishiguro teach a temperature controlled enclosure. Both references in fact teach away from the use of the same.

In addition, all of the other arguments presented with respect to claims 30 and 41 remain equally applicable here, and are not repeated for sake of brevity.

With respect to the Examiner's rejection of claim 46, Applicant cannot discern the combination of references which the Examiner wishes to rely upon. The statement of the rejection indicates that the Examiner is applying the combination of Ishiguro, Wechsler and Johnson. However, the Examiner also cites the patents to Wayne and Lawyer. The rejection does not state the manner in which Johnson or Lawyer might be relied upon by the Examiner.

To the extent that the Examiner relies upon Wayne to teach an acoustically damped enclosure, this rejection suffers from all of the deficiencies pointed out in connection with claim 33, which arguments are incorporated herein by reference.

Claim 48 has been rejected under §103 as being obvious over Ishiguro, Wechsler and Hsu.

Inasmuch as claim 48 is dependent upon claim 45, which is allowable for the reasons pointed out above, it is respectfully submitted that claim 48 is likewise allowable. Moreover, as previously argued, Hsu does not provide a PZT for the purpose of controlling the repetition rate

of his laser, inasmuch as the Hsu laser is a continuous wave laser and does not have a "repetition rate". As previously noted, Hsu uses the PZT to tune the wavelength of his laser.

Finally, claims 60 and 61 have been rejected over the combination of Ishiguro and Wechsler.

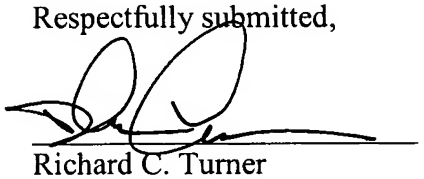
In this rejection, the Examiner again relies upon Wechsler for the disclosure of a "temperature controlled enclosure", whereas Wechsler actually teaches away from same, as does Ishiguro. Accordingly, this rejection is defective for the same reasons as discussed above in connection with claims 30 and 41.

In view of the foregoing discussion, it is apparent that the references relied upon by the Examiner are individually lacking in disclosures relevant to the claimed invention, and similarly, the combinations thereof relied upon by the Examiner are similarly suspect. Accordingly, favorable reconsideration of the subject application is kindly requested in view of the foregoing comments.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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